

## A B S T R A C T

A load comprising one or more porous substrates (10) for densification is heated in an oven into which a reaction gas containing at least one carbon-precursor hydrocarbon is admitted, the effluent gas being extracted from the oven via an extraction pipe (26) connected to an outlet from the oven. The content in the effluent gas of at least one compound selected from allene, propene, and benzene is measured, and as a function of the measured content, the process is controlled by adjusting at least one parameter selected from the rate at which the reaction gas is admitted into the oven, the rate at least one component of the reaction gas is admitted into the oven, the transit time of the gas through the oven, the temperature to which the substrate(s) is/are heated, and the pressure that exists inside the oven. The at least one parameter is adjusted in such a manner as to maintain the measured content at a value which is substantially constant. A densification process can thus be controlled in real time or modelled.